

**REMARKS**

Claims 1 and 11 have been amended. Support for the amendments to Claim 1 can be found at least in original Claim 32 and in the specification at page 14, line 12. Claims 39, 40, 44 and 45 have been amended to depend from Claim 1 rather than canceled Claim 2. Claims 2, 32 and 33 have been canceled without prejudice or disclaimer. Claims 7, 12 and 13 were previously canceled. After entry of the above amendments, Claims 1, 3-6, 8-11, 14-31 and 34-45 are pending. Claims 34-38 have been withdrawn.

***Claim Rejections under 35 U.S.C. §112***

Claims 1-6, 8-11, 14-33 and 39-45 have been rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite (pages 8-10 of the Official Action). This rejection is respectfully traversed. In particular, dependent Claim 11 has been amended to clearly recite that the method recited therein result in at least some of the probes being bound to a first enzyme conjugate comprising the first enzyme and at least some of the probes being bound to a second enzyme conjugate comprising the second enzyme. In addition, Claim 11 clearly recites that the method recited therein occurs “prior to contacting the support surface with the substrate composition” (line 4 of Claim 11). In addition, Claim 1 has also been amended to clarify that the probes are bound to the enzyme conjugates prior to contacting the support surface with the substrate composition. It is respectfully submitted that the claims as amended clearly define the applicants invention. Reconsideration and withdrawal of this rejection is therefore respectfully requested.

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***Claim Rejections Under 35 U.S.C. §103(a)***

Claims 1, 3-6, 9-11, 15-26 and 28-32 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 4,931,223 to Bronstein (hereinafter referred to as “Bronstein”) in view of U.S. Patent No. 6,309,822 B1 to Fodor et al. (hereinafter referred to as “Fodor”) (page 6 of the Official Action). Claim 8 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Bronstein in view of Fodor and further in view of U.S. Patent No. 6,905,826 to Ferea et al. (pg. 11 of the Official Action). Claims 41-43 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Bronstein in view of Fodor and further in view of U.S. Patent No. 6,068,979 to Akhavan-Tafti et al. (pg. 12 of the Official Action). Claim 27 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Bronstein in view of Fodor and further in view of U.S. Patent No. 6,970,240 B2 to Oldham et al.

Claim 1 has been amended to incorporate the limitations of Claim 2. Claim 2, which depends from Claim 1, was not included in the above rejections. In addition, the remaining rejected claims depend either directly or indirectly from Claim 1. Reconsideration and withdrawal of each of the above rejections is therefore respectfully requested.

Claims 1, 9, 10, 23-26, 28-29, and 32-33 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.K. Patent Application No. GB 2 246 197 A to Bers et al. (hereinafter referred to as “Bers”) in view of Fodor (page 21 of the Official Action). This rejection is respectfully traversed.

As set forth above, Claim 1 has been amended to incorporate the limitations of Claim 2. Claim 2, which depends from Claim 1, was not included in the above rejection.

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Accordingly, it is respectfully submitted that Claim 1 is patentable over Bers in view of Fodor. In addition, each of Claims 9, 10, 23-26, 28-29, and 32-33 depends from Claim 1 either directly or indirectly. Accordingly, these claims are also patentable over Bers in view of Fodor. Reconsideration and withdrawal of this rejection is therefore respectfully requested.

Claims 2, 39-40 and 44-45 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Bronstein in view of Fodor and further in view of U.S. Patent No. 5,145,772 to Voyta et al. (hereinafter referred to as “Voyta”) (pg. 13 of the Official Action). This rejection is respectfully traversed.

According to the Official Action, Bronstein and Fodor allegedly teach a method of detecting chemiluminescent emissions on a solid support using a “two-substrate composition”. As acknowledged in the Official Action, however, the combination of Bronstein and Fodor fails to “specifically teach that the two-substrate composition is contacted with the solid support in the presence of a composition comprising a chemiluminescent quantum yield enhancing material” (pg. 13 of the Official Action). In order to remedy this acknowledged deficiency in the proposed combination, the Official Action relies upon Voyta for the disclosure of chemiluminescent enhancement agents. There is *prima facie* evidence of non-obviousness, however, which distinguishes the claimed invention from the cited references. Moreover, a declaration under 35 U.S.C. §132 has been submitted in related U.S. Patent Application No. 10/620,332. A copy of the declaration is also being submitted herewith. As set forth in the attached declaration, significant improvements in array performance can be realized by using an onium polymer or copolymer chemiluminescent enhancing material and a chemiluminescent

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1,2-dioxetane substrate in a microarray format on a two-dimensional support. It is respectfully submitted that this evidence of non-obviousness distinguishes the subject matter of the claims from the proposed combination of Bronstein, Fodor and Voyta. In view of the above, reconsideration and withdrawal of this rejection is respectfully requested.

***Double Patenting Rejection***

Claims 1-6, 8-11, 14-33 and 39-45 have been provisionally rejected on the grounds of non-statutory obviousness-type double patenting as allegedly being unpatentable over Claims 28-47 of copending U.S. Patent Application Serial No. 10/462,742 in view of U.S. Patent No. 6,068,979 to Akhavan-Tafti and Bronstein et al. (pages 26-27 of the Official Action). This rejection is respectfully traversed.

It is respectfully submitted that a terminal disclaimer over U.S. Patent Application Serial No. 10/462,742 was submitted with the previous response filed on September 26, 2006. A copy of the date stamped post card along with a copy of the Terminal Disclaimer over U.S. Patent Application Serial No. 10/462,742 is submitted herewith. As set forth in the Official Action, “[a] timely filed terminal disclaimer in compliance with 37 C.F.R. 1.321(c) or 1.321(d) may be used to overcome an actual or provisional double patenting rejection based on a nonstatutory double patenting ground” (Page 19 of the Official Action). Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

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**CONCLUSION**

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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